

WATERSHED PERSPECTIVE



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Graphic by Scott Wise

Preserve, Protect and Restore

Coordinating Our Watershed Approaches

Late last summer, EPA Region 4 created the Watersheds and Non Point Source Section to put more emphasis on promoting, supporting and implementing watershed management efforts at the local watershed scale. This change builds upon previous watershed experiences with larger-scale watershed efforts, such as those associated with the National Estuary Program, and focuses on building the capacity of local watershed stakeholders to protect and restore water quality and critical aquatic resources. Local watershed stakeholders include watershed organizations and local governments, as well as the full array of stakeholder groups for a particular watershed. The goal is to build capacity and instill a desire for local communities to implement and maintain watershed

management approaches to deal with issues in their particular watershed. One of the primary goals of our involvement is restoring water quality and removing waterbodies from the list of impaired waterbodies published by the states. We will be working in close association with the states and their rotating basin strategies to identify mutual goals and actions that complement each of our ongoing watershed efforts. In discussions with Region 4 states to date, each has indicated a desire for EPA to work in watersheds that have a cross-state boundary component. A dominant federal presence, offers opportunities to work with tribes, or are identified by the state or local governments because of the value added by EPA's involvement in that particular watershed. Our staff has been working with GIS information available in the Region, as well as with input from the states in the region to identify watersheds.

We are investigating the feasibility of becoming involved in developing one or more aspects of the watershed management process. We have initiated involvement in approximately fifteen new watersheds and are actively evaluating what actions need to be supported or developed to encourage watershed planning (in addition to building stakeholder support, our project managers will be pulling together assessment information on specific watersheds, encouraging the development of a watershed plan that would identify necessary actions to address water quality impairments, assisting in implementing those actions, and building the infrastructure to evaluate and monitor the success of those actions and provide that information back to the stakeholders). We look forward to working with the states and local watershed stakeholders to accomplish the mutual goal of protecting and restoring water quality.

Cumberland River Compact



The Cumberland River Compact is a not-for-profit educational organization with a mission to enhance the water quality of the Cumberland River and its tributaries through education and by Promoting cooperation among citizens, businesses, and agencies in Kentucky

and Tennessee. The Cumberland River mainstem is 696 miles long with a basin that encompasses almost 18,000 square miles and a stakeholder population of nearly 2 million. The size and diversity of land types, uses, and people have provided the Compact and the people of this region a challenge to organize an approach which can affect the water quality of this river and its entire watershed. By working with local communities, the Compact has started reaching out to the 14 separate watersheds that make up the Cumberland

“Watershed the land area that drains to a body of water such as a stream, lake, wetland, or estuary”

Basin - one at a time in conjunction with the state's five-year Watershed management cycle.

The Harpeth River and Red River Watershed Stakeholder projects have been completed resulting in two new local organizations - The Harpeth River Watershed Association and the Red River Watershed Association. Each organization is working with the Compact and with their neighborhood organizing workshops, river clean-ups, and water quality testing. They are also involved in local planning and zoning. Each holds a seat on the Compact's Board of Directors and Water Quality Advisory Committees to ensure ongoing communication and partnering.

With the goal to educate and promote cooperation among citizens, businesses and agencies the following programs have been established to work together with the new organization: **Splash Bash Teacher Training Festival** -

A combination teaching and celebration program for the river.

Land Education Program - Educating “strange bedfellows” through annual program workshops presented by the Land Committee.

Water Quality Advisory Committee - This committee is responsible for making certain that technical information is beyond reproach. The committee has members who represent: the Kentucky Division of Water, the Natural Resource Conservation Service, Greater Nashville Regional Council, the Tennessee Department of Agriculture's Nonpoint Source Program, CTE Engineers, the Tennessee Division of Water Pollution, and U.S. Army Corps. For additional information on the Cumberland River Compact, contact: *Susan Rezai EPA Watershed Section, or local coordinator Margo Farnsworth Exec. Director Cumberland River Compact P.O. Box 41721 Nashville, TN 37204 615-837-1151 email: screen-door@bigfoot.com*

Upper Cahaba River



The Upper Cahaba River watershed (defined roughly as the area from the rivers' headwaters to Helena) is one of the most important environmentally sensitive areas in the State of Alabama. It is home to numerous species of plants and wildlife, including

several endangered species, and it is the source of a large portion of the Birmingham metropolitan area's drinking water supply. The Cahaba River is the longest remaining free-flowing river in the 44,000 square mile Mobile River Basin and the most significant refuge for the basin's diverse freshwater life. After studying over 2000 watersheds, The Nature Conservancy named the Cahaba as one of eight river “Biodiversity Hotspots” across the U.S. worthy of special preservation efforts. Many organizations and individuals have noticed the

need to build consensus about development patterns in the watershed and create a balanced approach to conservation and development. Governmental jurisdictions in the Upper Cahaba Watershed have recently formed a “consortium” of local government elected officials for the purpose of authorizing and supporting the development of a natural resource-based watershed plan. The consortium has recently initiated the development of a ‘big picture’

watershed plan.

The current watershed planning effort will produce a range of different scenarios and strategies for growth management and protection of the watershed. These scenarios will include continuation of current trends, enhanced use of best management practices, use of innovative design and development of infrastructure to reduce watershed degradation, managing patterns and density of land use to reduce impacts in sensitive areas, and protection of forested open space. This effort will create a vision of the range of possible choices and will provide an initial qualitative evaluation of these approaches. A second phase (currently being considered for funding by EPA) will entail the development of a watershed implementation plan. This effort will include: **Monitoring and water quality modeling** to translate land use and site design scenarios into water quality and cost impacts, for use as a local government decision making tool. **Open space protection planning "greenprint"** to protect critical lands within the watershed, **Development design and management** intended to create a set of comprehensive development regulations to reduce watershed degradation.

A Watershed Planning workshop was held on April 29, 2002, in Birmingham to "kick-off" these watershed

planning and protection efforts. The workshop was organized by the Greater Birmingham Regional Planning Commission and sponsored in-part by EPA. The workshop was well attended by local government representatives, developers, and citizens as well as government agency representatives.

The Director of the Center for Watershed Protection, a leader in innovative watershed planning, restoration, and protection, provided the bulk of information to workshop participants. There are a great number of partners in these efforts. These include the Cahaba Consortium of Local Governments, Upper Cahaba Technical Committee, Upper Cahaba Advisory Committee, Birmingham Regional Planning Commission, Cahaba River Society, Alabama Rivers Alliance, US Environmental Protection Agency, Jefferson County, The City of Birmingham, The City of Hoover, CAWACO Resource Conservation & Development Council, The Birmingham Water Works and Sewer Board, Storm Water Management Authority, Region 2020 Citizen Leadership Group. For more information contact: Hudson Slay EPA-Watershed Section, 404-562-9388 or local coordination: Larry Watts, Director Regional Planning Commission of Greater Birmingham Birmingham, AL 35205 (205) 251-8139 lwatts@brpc-al.org

Celebrate Water Quality—Volunteer!



October 18, 2002 is the 30th Anniversary of the enactment of the Clean Water Act. This date marks a milestone in the efforts to protect our nation's water resources. This anniversary also presents an excellent opportunity to **Enhance public appreciation** for the importance of our water resources, **Celebrate water quality** improvements, **Build a better understanding** of remaining challenges and solutions, and **Rekindle the public stewardship** ethic and support for watershed protection programs, and **Educate** our nation's young people. In support of these goals, Congress, along with a number of the nation's Governors and National organizations have proclaimed 2002 as the Year of Clean Water. Citizen monitors established volunteer monitoring organizations, federal, state, Tribal and local monitoring staff are invited to participate in National Water Monitoring Day on October 18, 2002. Citizen monitors including families, classrooms, civic organizations and service clubs, can participate and sample for a core set of water quality parameters (Temperature, Ph, Water Clarity, Dissolved Oxygen) using an inexpensive National Water Monitoring Day test kit available through Year of Clean Water website. established volunteer monitoring organizations and government monitors may use their existing protocols, equipment, and monitoring methods.

For additional information visit us at: www.yearofcleanwater.org
Contents provided by Constance Alexander, USEPA, RG 4





Suwannee River Partnership is a coalition of federal, state, regional and local governments, universities and industry associations dedicated to assessing sources of nutrient loadings to the Suwannee River Basin and optimizing reductions in the loadings

to these waters emphasizing voluntary, incentive-based programs for protecting the environment and public health, increasing trends in nitrate-nitrogen concentrations in groundwater in the middle Suwannee River Basin, located east of Tallahassee. The Suwannee River Basin Nutrient Management Working Group was formed in 1998, with an "Agreement in Principle" signed by representative from 24 participating groups on January 25, 1999. EPA Region 4 is signatory to this Agreement. Five technical committees were developed to fulfill the mission of the Working Group these include **Animal Waste Management, Fertilizer Management, Human Waste Management, Monitoring and Research, and Education and Outreach.** These technical committees each have specific work plans to guide their activities within the basin.

Some of the Partnership accomplishments for 2001 are:

- 33 of 44 dairies now have conservation plans
 - 89 of 140 poultry farms have conservation plans
- The Environmental Quality Incentives Program (EQIP) provided financial assistance toward row crop and hay farmers for implementing mostly nutrient and irrigation water management practices.

As of September 2001, implementation of water quality oriented Best Management Practices (BMP's) has been funded by farmers (\$3.38M), USDA (\$4.9M); Suwannee River Water Management District (\$1.38M) and the Florida Department of Agriculture and Consumer Services (\$3.11K). The goal of the Working Group is to use all available resources to achieve an 80% participation level in the implementation of BMP's for row crops and achieve a 100% participation level in the implementation of adopted BMP's for animal producers (poultry and dairy) in the Middle Suwannee Basin by 2008. *Contents provided by Connie Roberts U.S. EPA (404) 562-9406. For more information contact Darrell Smith Suwannee River Partnership. Website address is: www.srwmd.state.fl.us Click on Suwannee River Partnership. Photo Courtesy G.B. Crawford*

CARES Farmers Recognized



600 attend CARES dinner

For several years north Florida farmers have implemented Best Management Practices to restrict nutrient flows into the Suwannee River. On July 2, 42 agriculturists were recognized for their voluntary efforts to manage nutrients on their properties. The recognition was offered under the auspices of the County Alliance for Responsible Environmental Stewardship (CARES). A total of 79 farm owners have been recognized by the CARES program since 2001. Last year, 34 farmers were recognized. CARES participants are identified by signs at their farm gates proclaiming that "This Farm CARES".



Left to right *State Sen. Richard Mitchell, left, state Secretary of Environmental Protection David Struhs, Region IV U.S. Environmental Protection Agency Administrator Jimmy Palmer, state Commissioner of Agriculture Charles H. Bronson, FFB President Carl B. Loop Jr. and state Rep. Dwight Stansel, host of the event, welcomed the CARES award recipients for 2002* *Contents & Photo Courtesy G.B. Crawford Florida Agriculture Farm Bureau. Web address gcrawford@sfbic.com*

Soque River Natural Channel Restoration

The Soque River Restoration Project is part of the Upper Chattahoochee Riverkeeper's Headwaters Riparian Restoration and Education Project demonstrating the value of functioning riparian (stream-side) zones to protect stream health. In close cooperation with the United States Environmental Protection Agency and a private landowner, Riverkeeper implemented a stream restoration project following the scientific principles of fluvial geomorphology on (natural riverine processes which simply means restoring the river to its natural channel) Fluvial geomorphology is the study of stream landforms. In applying it to stream restoration, we use natural and healthy rivers to plan restoration of degraded streams. This involves restoring things like meanders, floodplains, in-stream features such as riffles, pools, point bars and native vegetation to a natural state. It is a natural process for streams to change their position in



In this before the project picture, note the severe stream bank erosion from removal of riparian grasses, trees and shrubs. This eroded bank material contributes habitat damaging silt to down stream segments of the channel



This after the project photo shows the stream meander designed to help slow stream flood velocities which had been causing stream bank erosion.



Root wad was placed along the banks to create roughness which slows flood velocities and protects stream banks. Scour pools under the root wads also provide fish habitat.



A rock vane was created to slow flood waters near the banks and increase flood velocities in the channel center. This protects stream banks from erosion and helps the stream scour the channel center for better sediment transport. The deeper channel is better for fish

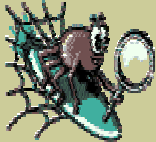


Numerous native trees and shrubs were planted along the stream to reestablish a forested stream corridor

a valley and their in-stream features over geologic time. Human induced agricultural practices have relocated streams and adjacent vegetated buffer areas to increase tillable land for row crops or animal grazing pastures. At this Soque River site, the natural stream functions were greatly altered by artificial stream relocation and straightening. Once altered the stream began trying to return to its natural meandering condition. It began eroding its banks in an attempt of rebuild its historic meanders and reestablish its floodplain. Excessive bank erosion had introduced unnatural levels of silt to the stream, and water quality was suffering. The accelerated rate of bank and channel erosion and subsequent channel deposition was damaging the ecology of the stream. As an example, fish need deep pools in which to live. If the pools are filled by siltation from eroding banks, the fish have no place to live. In an unstable stream such as this, more silt is entering the stream than it can be carried away. As a result the silt chokes the system, filling pools and covering the insects on which the fish live. Contents provided by Tony Able U.S. EPA. For more information contact Jennifer Derby at 404 562-9401, or Tony Able at 404 562-9273

Graphic Design

We would like to thank Lloyd Scott Wise II for designing and providing our graphic cover. Lloyd is a graduate of Art Institute of Atlanta. For additional information visit his website at: WWW.SKITZO-MEDIA.COM or by telephone at 770 335-1718. E-Mail address is scott@skitzo-media.com



WATER FUN FACTS

Water serves as nature's thermometer, helping to regulate the earth's temperature

The average American uses 60 gallons water in the house each day

It takes 120 gallons of water to produce one egg, and 300 gallons to produce a loaf of bread

MARK YOUR CALENDAR!

Volunteer ! Sample Water Quality In Your Watershed
October 18, 2002 is the 30th Anniversary of the enactment of the Clean Water Act. For more information on how you

In celebration of the 30th anniversary of the Clean Water Act, EPA has developed numerous publications about our water quality. For more information contact

*U.S. Environmental Protection Agency
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Washington D.C. 20460 or at 202 564-*



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CHANGE SERVICE REQUESTED